Name: HW125\_RhombusArea

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Geometry, Period

Due Date: Tue, 24 Mar 2015

**Geometry**

**Homework**



**Failure to show all work (including drawing & labeling shapes) will result in LaSalle!**

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| 1. One **diagonal** of a rhombus is 6 inches and the other is 8 inches.   a  c  b  a. Label the lengths of ‘a’ and ‘b’ *(remember that ‘a’ is half of 6 and ‘b’ is half of 8)*  b. How long is each side of the rhombus? *(use the Pythagorean Theorem)*  c. Find the perimeter.  d. Find the area. *A = ½ (diagonal1)(diagonal2)* | 2) The diagonal of a square is 20 cm. Find the length of one side of the square and the perimeter of the entire square.  a  b  a. Label the lengths of ‘a’ and ‘b’.  b. How long is each side of the square (rounded to the nearest tenth)? *(use the Pythagorean Theorem)*  c. Find the perimeter.  d. Find the area. A = S2 |

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| 1. The size of the obtuse angle of a rhombus is twice the size of its acute angle. The side length of the rhombus is equal to 20 feet. Find its area. | 1. The lengths of the diagonals of a rhombus are 10 and 24 meters. Find the perimeter of the rhombus. |
| 1. The **perimeter** of a *rhombus* **is 60 feet** and one of its **diagonal** has a **length of 20 feet**. Find the area of the rhombus.   *1. Rhombus… all sides are equal.*  *If the perimeter of a rhombus*  *is 60 feet,* ***each*** *side is \_\_\_\_\_\_ ft.*  *LABEL them.*  *2. If the diagonal is 20 feet, each HALF of the diagonal is \_\_\_\_\_\_ ft. LABEL them.*  *3. Use the Pythagorean theorem to find the missing pieces of the second diagonal.*  *4. If each HALF of the second diagonal is \_\_\_\_\_ ft., the whole diagonal is \_\_\_\_\_ feet.*  ***5. AREA of a rhombus = ½ (diagonal1)(diagonal2)*** | |
| 1. Classify all quadrilaterals—*parallelogram, rectangle, rhombus,* and *square*—for which the statement is true. (There may be more than one answer per statement.) 2. It is equilateral. 3. The diagonals are congruent. 4. It can contain obtuse angles. 5. It contains no acute angles. | 1. Classify the special quadrilateral. *Explain* your reasoning. *What information is given about this figure?* |
| 1. Find the values of *x* and *y.*     *Angles ‘S’ and ‘T’ are NOT congruent. They are \_\_\_\_\_\_\_\_\_\_\_\_\_, which means they ADD UP TO 1800.*  *Sides SV and UV ARE congruent which means that they are EQUAL to each other.* | 1. The diagonals of rhombus *PQRS* intersect at *T*. Given that *m*∠*RPS* = 30° and *RT* = 6, find the indicated measure. 2. *m***∠***QPR* 3. *m***∠***QTP* 4. *RP* 5. *QT* |
| 1. **Find the value of each variable in the parallelogram.** | 1. **Find the value of each variable in the parallelogram.** |